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**Extending the Study of Gelotophobia, Gelotophilia, and Katagelasticism in
Romantic Life Towards Romantic Attachment**

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Abstract

Gelotophobia (fear of being laughed at), gelotophilia (joy in being laughed at), and katagelasticism (joy in laughing at others) describe individual differences in how people deal with ridicule and being laughed at. We study their association with romantic attachment styles and romantic outcomes in adults. Study 1 ($N = 247$) shows that gelotophobia goes along with higher expressions in attachment anxiety and -avoidance. This study also provides support for the notion that gelotophobes demonstrate a lower likelihood of entering romantic relationships (Odds Ratio = 0.62/0.64 for past/current relationship status). Gelotophilia goes along with lower avoidance and katagelasticism exists independently from romantic attachment. Study 2 replicates the findings in 154 heterosexual romantic couples using Actor-Partner Interdependence Model analyses. However, katagelasticism was related to greater attachment anxiety in this sample of couples. A mini-meta analysis using data from both studies ($N = 555$) clarified this association and showed that the joy in laughing at others yields a small positive association with attachment anxiety. Further, attachment styles mediate associations between the dispositions and relationship satisfaction in the couples. Overall, the dispositions are distinctively related with romantic attachment styles and our findings contribute to the understanding of the role of dealing with ridicule and laughter in romantic life.

Keywords: Attachment styles; Gelotophobia; Gelotophilia; Katagelasticism; Romantic relationships

Humor and laughter play an important role in social and romantic life; amongst others, laughter can signal joy and romantic attraction (e.g., Grammer, 1990; Wilbur & Campbell, 2011) and couples' joint laughter robustly predicts their relationship satisfaction (RS; Kurtz & Algoe, 2015). While common wisdom proposes that laughter is “the best medicine,” interindividual differences in how people experience and react to ridicule and laughter exist (Ruch & Proyer, 2008; 2009a). Most importantly, a group of people exists who do *not* perceive laughter as a joyful experience, but as a malicious form of ridicule—a means to put them down. Thus far, only little is known about the impact of interindividual differences in how people deal with laughter and ridicule in romantic relationships. Especially, dyadic data are missing. We aim to narrow this gap by studying the association between three dispositions toward laughter and adult attachment styles and how they affect romantic life.

1.1 Dispositions toward Ridicule and Being Laughed at

Three individual differences variables describe how people deal with ridicule and being laughed at; namely, *gelotophobia* (fear of being laughed at; Greek: *gelos* = laughter), *gelotophilia* (joy in being laughed at), and *katagelasticism* (joy in laughing at others; Greek: *katagelao* = laughing at; Ruch & Proyer, 2008, 2009a; see also Ruch, Hofmann, Platt, & Proyer, 2014). Those high in *gelotophobia* (gelotophobes) do not perceive laughter as a positive or joyful experience, but as a malicious form of ridicule (Ruch & Proyer, 2008). Gelotophobes experience laughter as being directed towards them and display an almost paranoid sensitivity toward laughter-related cues (e.g., smiling). There is evidence for a perceptual bias toward signs and precursors of laughter (e.g., scanning the environment for laughter-related cues; misperception of its emotional valence; e.g., Hofmann, Platt, Ruch, & Proyer, 2015; Platt, Hofmann, Ruch, & Proyer, 2013; Ruch, Altfreder, & Proyer, 2009; Torres-Marín, Carretero-Dios, Acosta, & Lupiáñez, 2017). The fear of being laughed at is best understood as a continuum ranging from no to high expressions and can be distinguished from related concepts such as social phobia or fear of negative evaluation (e.g., Carretero-

Dios, Ruch, Agudelo, Platt, & Proyer, 2010; Edwards, Martin, & Dozois, 2010; Weiss et al., 2012). The analysis of high scorers in gelotophobia shows that what is shared with anxiety-related concepts is the tendency to “control, withdrawal, and internalizing” as a coping strategy for derision, while the “paranoid sensitivity to anticipated ridicule” and “disproportionate, negative responses to being laughed at” are its distinct characteristics (Platt, Ruch, Hofmann, & Proyer, 2012). Further, emotional experiences of gelotophobes are characterized by shame and low inclinations to happiness (Platt & Ruch, 2009). In broad personality systems such as the Eysenckian PEN-model and the Five Factor Model, gelotophobes are introverted and neurotic with higher expressions in more clinically-saturated earlier versions of the Psychoticism-scale (Ruch & Proyer, 2009b).

Gelotophilia describes the *joy* in being laughed at and those with high expressions experience laughter as a sign of appreciation by others (Ruch & Proyer, 2009a). They actively seek and establish situations in which they can get laughed at; for example, by over-exaggerating stories or incidents happening to them without experiencing feelings of shame when being the target of a joke, or sharing something that is potentially embarrassing. One might think of comedians using self-deprecating humor to make the audience laugh at their expense, or behaviors exhibited by class clowns. Although the *joy* in being laughed at is negatively related with the *fear* of being laughed at, they do not constitute two poles of the same construct. The intercorrelations are far from indicating redundancy (i.e., $\sim -.30$; Ruch & Proyer, 2009a) and both are differentially related to outcome variables such as RS or character strengths (Brauer & Proyer, 2018; Proyer, Wellenzohn, & Ruch, 2014). Gelotophilia is associated with extraversion and emotional stability (e.g., Ruch, Harzer, & Proyer, 2013).

Further, there are individual differences in the joy in laughing *at others* (*katagelasticism*). Those high in katagelasticism actively seek attributes in others that might serve to elicit laughter and ridicule directed at the target; thereby, accepting that they might feel hurt. They do not feel bad about laughing at others, but rather think that those who do not

like being laughed at should just fight back (Ruch & Proyer, 2009a). They see laughter and being laughed at as part of life and pursue an “eye-for-an-eye”-principle when it comes to ridicule. The joy in laughing at others is particularly pronounced in younger males (e.g., Ruch & Proyer, 2009a) and goes along with inclinations to gelotophilia ($r \sim .30$; Ruch & Proyer, 2009a) while being unrelated to gelotophobia. The broad personality of katagelasticians is characterized by low agreeableness (Ruch et al., 2013). Studies with young children (starting from age 9) and adolescents show that katagelasticism is associated with bullying-type of behaviors in school (in self-ratings and ratings by peers and teachers; Proyer, Meier, Platt, & Ruch, 2013; Proyer, Neukom, Platt, & Ruch, 2012).

Dispositions towards laughter in romantic life. Previous research has provided two main findings on how the three dispositions affect romantic outcomes. Firstly, there is a well-replicated association between gelotophobia and higher likelihood of being single across all ages (e.g., Ruch & Proyer, 2008; see Platt & Forabosco, 2012 for an overview). Moreover, when testing participants of higher-age (≥ 60 years), the highest expressions of gelotophobia existed in singles, whereas those in a long-term relationship showed the comparatively lowest expressions. Further, singles who desired a romantic partner showed the strongest inclinations to the fear of being laughed at. There were no robust associations between being single and gelotophilia or katagelasticism (Platt & Forabosco, 2012). One might argue that gelotophobes withdraw from entering romantic relationships; for example, when smiling and laughter by a potential partner is misinterpreted during courtship (see also Platt, Proyer, Hofmann, & Ventis, 2016). Secondly, Brauer and Proyer (2018) studied the association between the dispositions and RS in 154 romantic couples using *Actor-Partner Interdependence Model* analyses (APIM; Kenny & Ledermann, 2010). High fear of being laughed at relates to lower RS, while the joy in being laughed at is positively related to RS (mainly in females). Moreover, *partners* of gelotophiles reported greater RS as well. Finally, the joy in laughing at others was widely unrelated to RS, except for predicting stronger *dissatisfaction* based on

greater conflict among the partners (e.g., high frequency of disagreement). While these studies support the notion that the dispositions affect romantic life, research on potential underlying mechanisms is needed.

1.2 Adult Attachment

While attachment styles have been initially studied in children-parent relationships (e.g., Bowlby, 1982), *anxious* and *avoidant* attachment (Brennan, Clark, & Shaver, 1988; Hazan & Shaver, 1987; for an overview see Fraley & Roisman, 2019) describe individual differences how adults are approaching close relationships. Attachment theory assumes that interdependent beliefs regarding oneself and the availability of important others are subsumed in an *inner working model* of interpersonal relationships, which are modified through learning experiences throughout life (cf. Fraley & Roisman, 2019). For example, positive experiences with close others (i.e., parents during childhood; the romantic partner during adulthood) promote positive self-representations (e.g., feeling lovable), whereas experiences of rejection (e.g., low parental care) contribute to developing and internalizing negative expectations towards the self (e.g., low self-esteem; self-efficacy) and others (e.g., mistrust; Bowlby, 1982; Hazan & Shaver, 1987; Shaver & Brennan, 1992).

Although early research assumed that attachment styles develop on the basis of experiences with parental caretakers during early childhood and show robust stability across life (Fraley & Roisman, 2019), there is strong evidence for dynamic processes. Firstly, attachment patterns differ toward attachment figures (i.e., parents, friends, and romantic partners; Klohnen, Weller, Luo, & Choe, 2005). Secondly, attachment changes over time, based on experiences with the attachment person (e.g., experiencing infidelity and/or break-up; see Fraley & Hudson, 2017 for an overview).

High expressions in attachment *anxiety* are characterized by worries over the relationship and the romantic partner (e.g., whether the partner will reciprocate affection, or the instability of the relationship) while a desire for closeness with the partner exists.

Avoidance covers behavioral tendencies towards limiting the interdependency with one's partner by avoiding closeness to maintain autonomy (e.g., Brennan et al., 1988; Fraley & Roisman, 2019). While early research has preferred a type-approach to romantic attachment, there is robust evidence that attachment styles are best understood and measured dimensionally (Fraley, Hudson, Heffernan, & Segal, 2015). Numerous studies have shown how attachment affects romantic life; most importantly, it has been well-replicated that avoidance and anxiety independently predict low RS (e.g., Butzer & Campbell, 2008; Neumann, Rohmann, & Bierhoff, 2007) and low propensity to enter a romantic relationship throughout life (e.g., Feeney & Noller, 1990).

1.3 The Present Study

We argue that how people deal with ridicule and being laughed at is associated with how they approach and experience close relationships. For example, the current model of antecedents and putative causes of gelotophobia suggests that experiencing mockery by parents, caretakers, or friends in childhood and adolescence contributes to the development of greater expressions in the fear of being laughed at (Ruch et al., 2014). This has received empirical support as gelotophobia is substantially associated with the remembered experience of punishment through ridicule by the father/mother ($r = .31$) and avoiding contact with peers to prevent being laughed at ($r = .47$; $N = 863$; Ruch, Proyer, & Ventis, 2010). When testing remembered parenting styles, those high in gelotophobia report less warmth (e.g., not supporting the child, showing love), higher parental control (e.g., worrying that the child could be harmed), and higher prevalence of punishment (e.g., physical punishment or eliciting shame). One might expect that such experiences in close family-relationships paired with repeated and intense perceptions of being ridiculed and laughed at (e.g., Ruch et al., 2010; Weibel & Proyer, 2012) facilitate the development of anxious and avoidant behaviors towards close relationships (e.g., perceiving close others as unreliable; not perceiving close relationships as a secure environment; etc.). Wu and colleagues (2015) provided a direct test

of associations between *parental* attachment and the laughter-related dispositions in 13 to 15-year-olds. Those high in gelotophobia reported less trust and communication with their parents and also felt more alienated from them ($r_{\text{Father/Mother}} = -.21/-.29$, $N = 163$). Finally, Führ and colleagues (2015) have studied the fear of being laughed at in 1,322 11 to 16-year-olds and found inclinations to greater loneliness and negative self-views (e.g., self-acceptance). In line with these findings, Weibel and Proyer (2012) have shown that gelotophobes remember low social support by their family, peers, and teachers while gelotophiles report greater satisfaction with the perceived support. Overall, gelotophilia is associated with greater experiences of parental warmth, and katagelasticism was positively related with a parental style characterized by punishment (Proyer, Estoppey, & Ruch, 2012; see also Wu, Huang, Wang, & Chen, in press). Similarly, attachment was low in those with high expressions in the joy in laughing at others ($r = -.21/-.22$), while the joy in being laughed at was unrelated to parental attachment ($|r| < .12$). The pattern was replicated in 101 children diagnosed with autism in Wu et al. (in press). Again, katagelasticism was unrelated to memories of social support. While these findings describe the attachment to caretakers and parents, we are interested in the role of the dispositions for romantic attachment in adults.

Findings in adults. Thus far, direct tests of the associations between the three dispositions and romantic attachment styles in adults are missing. However, there is earlier research on variables relating to social relationships. For example, in an analysis of character strengths (i.e., morally positively evaluated traits), gelotophobia was negatively associated with valuing close relationships (*Love*), awareness of others' motives (*Social Intelligence*), positive future expectations (*Hope*), and the ability to forgive others (*Forgiveness*)—gelotophilia demonstrated numerically smaller, but positive associations with these strengths. Except for being low in *Forgiveness*, the joy in laughing at others was unrelated with interpersonal strengths (Proyer et al., 2014). Finally, Brauer and Proyer (2018) found that the fear of being laughed at was robustly positively related with domains of RS that could be

indicators and consequences of insecure attachment; namely, mistrust towards the partner and feelings of constraint. Both relationship characteristics existed independently from gelotophilia and katagelasticism. However, generalizability of this finding is limited, as only couples were studied and a direct test with attachment styles in a heterogeneous sample regarding relationship status is needed to localize the three dispositions with the dimensions of avoidance and anxiety.

Our main aim is testing the associations between the three dispositions toward ridicule and being laughed at and attachment styles with respect to the (potential) romantic partner in adults. While Study 1 examines these associations in a heterogeneous sample with respect to relationship status, Study 2 focuses on dyadic data of heterosexual couples utilizing APIM analyses. Further, both studies will test the mediating role of attachment styles on indicators of romantic life; namely, relationship status (Study 1) and -satisfaction (Study 2). We will treat romantic attachment as the mediator between the laughter-related dispositions and the outcomes, as the literature provides strong evidence that romantic attachment is malleable (see Fraley & Hudson, 2017; Fraley & Roisman, 2019) and comparatively less stable than how people deal with ridicule and being laughed at (see Ruch et al., 2014). We assume that the stable dispositions toward ridicule and being laughed at contribute to shaping romantic attachment. For example, it has been argued that gelotophobes experience/misperceive laughter-related expressions of positive emotions (i.e., smiling) by (potential) romantic partners as ridicule (Brauer & Proyer, 2018; Platt & Forabosco, 2012). It seems likely that gelotophobes would not only terminate the dating process after feeling ridiculed but that this experience also contributes to their perception of (potential) romantic partners.

Study 1

We expected that gelotophobia would be positively related to higher expressions of avoidant and anxious attachment (H1.1). Previous research has shown that gelotophilia is unrelated to parenting styles and predictors of avoidant or anxious attachment in children and

adolescents. However, one might argue that their interpersonal behavior (e.g., approaching others joyfully to make them laugh) relates to expectations of security in their relationships (i.e., low expectations of being rejected). Thus, we expected that gelotophilia would be negatively associated with avoidant attachment (H1.2). Taking the mixed findings on katagelasticism into account (e.g., Brauer & Proyer, 2018; Proyer et al., 2012, 2014), we tested its association with romantic attachment in an exploratory fashion.

In line with previous studies (e.g., Platt & Ruch, 2010), we expected that gelotophobia goes along with greater likelihood of being currently single (H2.1) and not having been in a relationship previously in life (relationship *experience*; H2.2). Finally, we expected that attachment styles mediate the association between gelotophobia and relationship status (H3), as high anxiety and avoidance would predict “single” relationship status (cf. Feeney & Noller, 1990; Shaver & Brennan, 1992).

2 Method

2.1 Participants

Our sample comprised $N = 247$ (68.8% females, $n = 3$ have not indicated their gender) adults with a mean age of 28.8 years ($SD = 12.5$, median = 24, [18;72]). The majority (88.7%) has been in a romantic relationship at least once in their life and 67.6% were in a current romantic relationship (average length of 7.0 years; $SD = 10.3$, median = 3.5 years; 1-632 months). The educational status was high since $n = 74$ held a university degree, $n = 126$ held a school-leaving diploma qualifying them to attend university, $n = 20$ received a secondary school diploma, and $n = 23$ had completed vocational training. Forty-seven percent of the participants were undergraduates from several fields (e.g., engineering, pedagogy, or psychology), 33.2% were working professionals from a broad range of occupations (e.g., social, law, education), 8.9% were in vocational training, 5.3% worked in voluntary social service, 4.0% were retired, and 1.6% unemployed. Power analyses have shown that the sample size allows to detect associations of $\rho = .20/.18$ with 90/80% power at $\alpha = .05$ (two-

tailed) and to detect mediation effects when indirect paths are of medium effect size (Fritz & MacKinnon, 2007).

2.2 Instruments

The *PhoPhiKat-45* (Ruch & Proyer, 2009a) is the standard instrument to assess the three dispositions towards ridicule and being laughed at by 15 items each. Sample items are “When they laugh in my presence I get suspicious” (gelotophobia); “When I am with others, I enjoy making jokes at my own expense to make the others laugh” (gelotophilia); and “Often, disputes emerged because of funny remarks or jokes that I make about other people” (katagelasticism). Responses are given on a 4-point Likert-scale (1 = *strongly disagree*, 4 = *strongly agree*). There is broad evidence for the reliability in terms of internal consistency ($\alpha \geq .84$) and retest-stability ($r_{tt} \geq .73$ up to six months), and validity (e.g., stable 3-factorial solution across samples). The PhoPhiKat-45 has been widely used in research (e.g., Platt et al., 2013; Samson & Meyer, 2010) and is openly available (doi:10.23668/psycharchives.439).

The *Experiences in Close Relationships* scale (ECR; Brennan et al., 1988; German adaptation by Neumann et al., 2007) assesses romantic attachment styles of *Anxiety* (e.g., “I worry about being abandoned”) and *Avoidance* (e.g., “I prefer not to be too close to romantic partners”) by 18 items each using a 7-point Likert scale (1 = *do not agree at all*, 7 = *completely agree*). Neumann and colleagues provided evidence for the reliability (e.g., $\alpha \geq .85$) and validity (e.g., robust 2-factorial structure, convergent, and external validity with criteria such as relationship status, love styles, and RS) in independently collected samples of normal and clinical populations (see also Ehrental et al., 2009). The ECR is the standard instrument to measure adult attachment and is frequently used in research (e.g., Butzer & Campbell, 2008; Fraley et al., 2015). The instrument is openly available (doi:10.23668/psycharchives.377).

2.3 Procedure

Participants were recruited online through advertisements on the websites of the German-language “Psychology Today,” the Leibniz Institute of Psychological Documentation, and the authors’ department website as a study on personality and romantic relationships. It was emphasized that singles’ participation is desired. The only inclusion criterion for participation was being ≥ 18 years. The questionnaires were completed online (www.soscisurvey.de) and comprised demographic questions, the PhoPhiKat-45, and the ECR. Completion of the instruments took 20-25 minutes. The participation was voluntary and not financially compensated, but psychology undergraduates earned course credit upon request.

2.4 Data Analysis

Firstly, we analyzed the associations between the three laughter-related dispositions and attachment styles through bivariate correlation analysis. Secondly, we estimated the unique contribution of the laughter-related dispositions to attachment styles by computing multiple regression analyses. Thirdly, we tested for the mediation effects of attachment styles on the association between the fear of being laughed at and the criterion of relationship experience/status (coded 0 = not in relationship currently/previously, 1 = in relationship) using parallel mediation analysis (see Figure 1). The mediation analysis was computed in *Mplus* 7.0 (Muthén & Muthén, 1998-2012) using Maximum-Likelihood estimation. All data files and syntaxes are available in the Open Science Framework under osf.io/t8qbh/.

3 Results

3.1 Preliminary Analyses

Table 1 gives the descriptive statistics and intercorrelations between the PhoPhiKat-45 and ECR. The score distributions of all measures were comparable to previous findings (Neumann et al., 2007; Ruch & Proyer, 2009a). The inspection of skewness and kurtosis indicated normal distribution of the scores (all ≤ 0.65). Gelotophilia and katagelasticism were associated with younger age (with low effect sizes though; $r^2 < 2.8\%$) and were higher in

males (Hedge's $g = 0.32/0.53$; gelotophilia/katagelasticism). Females' attachment anxiety was slightly higher than in men ($g = 0.22$). Relationship status and -experiences were unrelated to gender but being older was associated with greater likelihood of having had a relationship in the past or presently, but effects were small (shared variance $< 2.9\%$). All measures demonstrated satisfying internal consistency ($\alpha \geq .86$). As in previous studies, gelotophilia and katagelasticism were positively correlated, but both were negatively related to gelotophobia ($|rs| \leq .37$). The attachment dimensions existed independently from each other ($r = .00, p = .979$).

3.2 Relationships between Dispositions towards Laughter and Attachment Styles

As expected, the fear of being laughed at was robustly related to higher anxiety and avoidance ($r^2 \leq 19.4\%$; see Table 1). Further, joy in being laughed at was associated with lower expressions in avoidance, but was unrelated to anxious attachment. Joy in laughing at others existed independently from attachment dimensions ($rs < .10$). Overall, controlling for age and gender in separate analyses did not alter the findings ($\max_{\Delta r} = .01$).

We estimated the unique contribution of the laughter-related dispositions to the attachment styles (= criteria) in hierarchical regression analyses. We entered age and gender as predictors in Step 1 to control for their potential contribution. In line with the hypotheses, we entered gelotophobia in Step 2, while Step 3 was used to test the incremental contribution of gelotophilia and katagelasticism. Each step was evaluated according to standardized regression effect sizes f^2 (i.e., $\geq 0.02/0.15/0.35$ indicate small/medium/large effects; Cohen, 1988). The *Variance Inflation Factors* indicated negligible multicollinearity (all ≤ 1.31).

Table 2 shows that the demographics age and sex yielded a small effect ($f^2 = 0.02$) in predicting attachment anxiety. As expected, the fear of being laughed at robustly predicted anxiety ($\Delta f^2 = 0.21$), accounting for 17% of the variance. The addition of gelotophilia and katagelasticism (Step 3) did not explain additional variance ($\Delta f^2 = 0.01$) and gelotophobia was the strongest predictor ($\beta = .46$). The final regression model showed that katagelasticism was

unrelated to attachment anxiety while gelotophilia was positively but not substantially related. In line with expectations, the fear of being laughed at yielded a positive effect (Step 2, $\Delta f^2 = 0.05$) on avoidance. Further, the addition of gelotophilia and katagelasticism accounted for a small regression effect ($\Delta f^2 = 0.02$; Step 3) explaining 8% of the overall variance in avoidance. The final regression model showed that our expectations were widely met, as gelotophilia was negatively related with avoidant attachment whereas there was a positive trend towards avoidance in those who enjoy laughing at others.

---Insert Tables 1, 2, & 3 here---

3.3 Associations with Relationship Status

We analyzed two parallel mediation models, examining attachment styles as continuous mediators to predict the dichotomous outcomes of past and current relationship status by gelotophobia (see Figure 1). Mainly, we are interested in the Odds Ratio (OR) coefficients and transformed them into effect size d (Borenstein, Hedges, Higgins, & Rothstein, 2009).

---Insert Figure 1 here---

As expected, the baseline models (see Table 3) show that gelotophobia goes along with a lower probability of having been in a romantic relationship in the past (OR = 0.64, $d = -0.24$) and currently (OR = 0.68, $d = -0.21$). The mediation model (see Figure 1 and Table 3) showed that high expressions in anxious attachment predicted relationship experience and -status negatively (path b_1 ; OR = 0.60/0.56, $d = -0.28/-0.32$). The same was true for avoidant attachment (path b_2 ; OR = 0.42/0.38; $d = -0.48/-0.53$). As expected, attachment styles mediated the association between the fear of being laughed at and past/current relationship status (ORs ≤ 0.68 , $ds \geq -0.28$). Overall, the findings support the notion that high anxiety and avoidance mediate the association between gelotophobia and the lower likelihood of entering a romantic relationship (total effect: OR = 0.62/0.64, $d = -0.26/-0.24$).

4 Discussion

Study 1 extended the knowledge on the role of the three dispositions toward ridicule and being laughed at (Ruch & Proyer, 2009a) in romantic life by localizing them in the classification of romantic attachment (Hazan & Shaver, 1987) and testing their effects on current and past romantic experiences. Overall, our findings were in line with expectations. Those with a high fear of being laughed at (gelotophobia) have shown inclinations to anxious and avoidant romantic attachment. Further, we replicated (e.g., Platt & Forabosco, 2012) the positive association between gelotophobia and single-status, also with respect to the whole lifespan. In line with expectations derived from previous studies (e.g., Brauer & Proyer, 2018; Platt et al., 2016), anxious and avoidant attachment uniquely contribute to this association. One might argue that entering a relationship could not only be hindered through gelotophobes' misperceptions of laughter and smiling but also by biased generalized expectations towards close relationships (i.e., worrying over the trustworthiness of the potential partner) and inclinations to avoid closeness and intimacy. A self-enforcing feedback loop combining the misperception-hypothesis and our findings on romantic attachment seems plausible: In the short-term, gelotophobes may perceive smiling and laughing with a potential partner as shame-induced experience of ridicule, which could lead to the termination of the courtship process, and thus, facilitates gelotophobes' negative perception of long-term romantic relationships. A similar type of behavior has been observed in a different context; namely, in therapists who utilize positively intended facial feedback (e.g., smiling) and techniques frequently used for initiating the basis for a good relationship with a new patient (e.g., usage of humor to elicit joint laughter), this might discourage those higher in gelotophobia as they feel that they are being laughed at by the therapist (Platt et al., 2016). A direct test in future research would be to study dyads during and after their first date(s) and see whether those higher in gelotophobia do not seek further contacts in settings with an increased ratio of smiling and laughter by the potential partner during the interaction.

This study contributes to the understanding of why gelotophobes are potentially less inclined to enter relationships. Of course, there is variation and it has been shown that there are gelotophobes who enter romantic relationships (e.g., Brauer & Proyer, 2018). One might expect that malleability of the attachment styles through positive experiences with (potential) romantic partners might buffer hindering mechanisms. For example, it has been shown that partners are substantially similar in the three dispositions (Brauer & Proyer, 2018; Proyer et al., 2012) and finding a similar partner (e.g., two gelotophobic partners might show less episodes of laughter and expressions of smiling in courtship) might help overcome previous experiences of ridicule, thus, reducing anxiety and avoidance by contradicting previous negative relationship experiences.

As expected, the other dispositions showed numerically small associations with romantic attachment. Those high in gelotophilia showed low inclinations to avoid close relationships. Being low in avoidance has been linked to more positive views of close others, a greater optimistic outlook on relationship stability, and greater openness to allow intimacy (Hazan, Campa, & Gur-Yaish, 2006), which might allow gelotophiles to approach others more openly. Finally, the joy in laughing at others (katagelasticism) was widely unrelated to anxiety and avoidance in adults. Hence, characteristics of parental attachment (Wu et al., 2015, in press) were not retrieved for adults' romantic attachment.

Limitations. Participants were well-educated and females are over-represented, which hinders the broad generalization of the findings. Further, there was an imbalance of the sample composition concerning relationship status (i.e., more participants in relationship than singles) and we could only analyze individuals, but no dyads in relationships. Finally, all data are of cross-sectional nature and self-reports and, therefore, potentially subject to distortions (e.g., answer styles).

Conclusion and outlook. Overall, this study shows that particularly the fear of being laughed at is related to maladaptive attachment styles, which contribute to gelotophobes' low

inclinations to entering long-term romantic relationships (e.g., Butzer & Campbell, 2008; Neumann et al., 2007, Platt & Forabosco, 2012). Dyadic data will be needed for a better understanding of the relation between attachment styles and the laughter-related dispositions in romantic relationships.

Study 2

The main aim of Study 2 is to replicate and extend the findings on the relationships between the three laughter-related dispositions and attachment styles by testing their associations in romantic couples. To address this question, we will use the *Actor-Partner Interdependence Model* (APIM; Kenny & Ledermann, 2010; see Figure 2a), which allows analyzing the full dyadic data of the couples and estimating two effects of interest: The *actor effect* describes the predictor-outcome associations on the *intrapersonal* level (i.e., replication of Study 1) and the *partner effect* describes the association of one partner's predictor variable (e.g., the male's gelotophobia) toward the partner's outcome (e.g., the female's attachment anxiety). Typically, partner effects are of smaller size than actor effects but incrementally explain outcomes such as RS (e.g., Dyrenforth, Kashy, Donnellan, & Lucas, 2010; see Weidmann, Ledermann, & Grob, 2016). While the analysis of actor effects allows replicating findings from Study 1 it should be seen as *conceptual* instead of *direct* replication since those who enter relationships show lower expressions in attachment anxiety and -avoidance (e.g., Hazan et al., 2006).

Numerous studies have shown that high expressions in avoidance and anxiety contribute to low RS (e.g., Butzer & Campbell, 2008; Hazan et al., 2006). We utilized the *Actor-Partner-Interdependence-Mediation-Model* (APIMeM; Ledermann, Macho, & Kenny, 2011; see Figure 2b) to estimate the mediating effects of romantic attachment styles on the association between the dispositions and RS.

---Insert Figure 2 here---

Taken together, we have used the APIM to replicate the findings of Study 1 on the actor level while we have exploratorily analyzed how the dispositions are related to one's partner's attachment. We extended these findings by testing for mediating effects of attachment on the relationship between the laughter-related dispositions and RS.

5 Method

5.1 Participants

The sample consists of 154 heterosexual romantic couples ($N = 308$; M [females/males] = 27.3/29.8, $SD = 9.9/11.0$). The average relationship duration was 6.14 ($SD = 8.54$; median = 3.33) years, 47.4% lived together, and 17.5% were married. Their educational status was high as more than a third of the women/men held a university degree (35.7/41.5%), a high school diploma qualifying them for university (43.5/31.2%), a regular high school diploma (4.5/6.4%), or a completed vocational training (8.4/10.4%); about 5% did not indicate their educational level (5.2/5.8%). The sample size was determined upon Ledermann and Kenny's (2017) recommendation of "between 80 and 100 couples" (p. 446).

5.2 Instruments

The same measures as in Study 1 were employed; The *PhoPhiKat-45* (Ruch & Proyer, 2009a) assessed the three dispositions towards ridicule and being laughed at and the *Experiences in Close Relationships* (ECR; Neumann et al., 2009) was employed to measure romantic attachment. Further, the single-item indicator of general romantic happiness ("How happy do you consider your marriage/relationship at the moment?") from Kliem et al.'s (2012) *Short Relationship Questionnaire* was used. Answers are given on a 6-point Likert scale (0 = *very unhappy*, 5 = *very happy*). There is broad evidence for its validity and it is frequently used in research (e.g., Faber & Schlarb, 2018; Job, Baucom, & Hahlweg, 2017).

5.3 Procedure

Data collection was advertised as a study on the role of the three dispositions in romantic relationships. Participants were recruited online and on-campus. Criteria for

participation were being ≥ 18 years, in a heterosexual relationship, and that both partners would be willing to take part in the online study. Each partner was separately provided with the link to the study that was administered online (www.soscisurvey.de). They were required to complete the questionnaires independently from their partner. To match the pairwise data of the couples, each partner provided a code on the basis of their initials and birth years. Participation was voluntary and no financial compensation was offered. Upon request, a personalized feedback on the three dispositions towards ridicule and being laughed at was provided after the study ended.

5.4 Data Analysis

We employed the APIM to examine the associations between the three dispositions and attachment styles (Figure 2b). In accordance with Kenny and Ledermann's (2010) recommendation, we tested whether the effects can be treated as equal for the males and females (i.e., indistinguishability). The parsimonious model (equal actor- and partner effect for males/females) was accepted when the χ^2 model fit test yields $p > .20$. We report the unstandardized effect parameters and evaluate statistical significance upon bias-corrected bootstrap ($k = 5,000$ samples) 95%-Confidence Intervals (CI). For transparency, we will also report the p -values for the point estimates.

The APIMeM (Ledermann et al., 2011) allows estimating the indirect effects of the actor's disposition toward laughter on the actor's outcome through its own mediator (*actor-actor*, a_{AB_A}) and the partner's mediator (*partner-partner*, a_{PB_P}) as well as on the partner's outcome through the actor's mediator (*actor-partner*, a_{AB_P} ; *partner-actor*, a_{PB_A}). Similar to conventional mediation models, total and total-indirect effects are computed on the basis of simple indirect effects. As in the simple APIM, we test for indistinguishability and parameters' statistical significance through bias-corrected bootstrapped 95%-CIs. All API(Me)Ms were computed in *Mplus* 7.0 (Muthén & Muthén, 1998-2012), using the SEM

framework (estimation method: maximum-likelihood). All data files and syntaxes are available under osf.io/t8qbh/.

6 Results

6.1 Preliminary Analyses

Descriptive statistics and intercorrelations of the measures are displayed in Table 4. The internal consistencies of all measures were satisfactory ($\alpha \geq .84$) and the score distributions were comparable to previous studies (Neumann et al., 2007; Ruch & Proyer, 2009a). The partners demonstrated similarity in their expressions of the three dispositions, anxious attachment, and their happiness with the relationship ($.19 \leq r \leq .61$), except for avoidant attachment ($r = -.05, p = .538$). Mean-level differences between partners were of small size ($ds \leq 0.49; M_d = 0.21$).

---Insert Tables 4 & 5 here---

6.2 APIM Analyses of the Dispositions and Attachment Styles

Firstly, we tested for distinguishability and found that effects were independent from gender ($\chi^2[2] < 3.10, p > .21$; see Electronic Online Supplement A for all parameters of the APIM). Secondly, we analyzed the actor effects. As in Study 1, gelotophobia was positively related to anxiety ($b = 0.23, 95\%-CI = [0.18, 0.28]$) and avoidance ($b = 0.17, 95\%-CI = [0.10, 0.25], ps < .001$). Further, the joy in being laughed at was associated with low avoidance ($b = -0.11, 95\%-CI = [-0.18, -0.05], p = .001$). There was a negative, statistically non-significant, trend towards anxiety ($b = -0.06, 95\%-CI = [-0.12, 0.00], p = .061$). Finally, the joy in laughing at others was positively associated with attachment anxiety ($b = 0.09, 95\%-CI = [0.03, 0.14], p = .002$), while being unrelated to avoidance ($b = 0.01, 95\%-CI = [-0.06, 0.07], p = .866$). Thirdly, we examined the partner effects and found a small positive association between gelotophobia and partners' attachment anxiety ($b = 0.05, 95\%-CI = [0.00, 0.10], p = .045$). The remaining associations between gelotophilia, katagelasticism, and partners' attachment styles were not substantial ($|b| \leq 0.04$, CIs contain zero, $ps > .145$).

6.3 The Mediating Role of Attachment Styles for Relationship Satisfaction

We employed the APIMeM to examine the mediating effects of attachment on the relationship between the dispositions and RS. Table 5 gives the baseline models (i.e., associations between the dispositions and RS; cf. Brauer & Proyer, 2018), and the APIMeM using anxiety and avoidance as mediator variables (see Figure 2b). The baseline models show that the fear of being laughed at yielded robust negative actor- and partner effects ($b \leq -0.28$, $95\%-CI < 0$, $ps < .02$) and gelotophilia was positively related with RS in female actors ($b = 0.44$, $95\%-CI = [0.10, 0.78]$, $p = .011$). Katagelasticism was unrelated to RS. In line with the literature (e.g., Butzer & Campbell, 2008), high expressions in anxious and avoidant attachment were negatively related to RS on the actor level ($bs \leq -0.37$, $|95\%-CIs| > 0$, $ps \leq .001$) and avoidant attachment accounted negatively for the *partner's* RS ($b \leq -0.19$, all $95\%-CIs < 0$). All effects in the APIMeMs were independent from gender ($\chi^2[6] \leq 7.46$, $ps > .28$).

Finally, we analyzed the indirect effects of the dispositions on RS via attachment. Regarding the fear of being laughed at, our expectations were met, as anxious and avoidant attachment had substantial indirect effects on actor's RS, that existed mainly for actors (see *total indirect* in Table 5). Moreover, this actor-based mediation effect of avoidance also affected the *partner's* RS negatively ($b_{\text{total indirect}} = -0.19$, $95\%-CI = [-0.32, -0.04]$, $p = .009$). Overall, there were substantial negative associations between gelotophobia and RS ($b[\text{Anxiety/Avoidance}] = -0.58/-0.50$, $95\%-CI = [-1.03, -0.28/-0.89, -0.16]$, $ps \leq .006$) for actors. Hence, anxious and avoidant attachment contributed to low RS in gelotophobes and also affected their partner's RS.

The investigation of the joy in being laughed at shows that its negative association with avoidance had indirect positive effects towards actors' ($b = 0.24$, $95\%-CI = [0.10, 0.43]$, $p = .002$) and partners' ($b = 0.15$, $95\%-CI = [0.00, 0.31]$, $p = .047$) RS. However, total effects of gelotophilia and RS were not substantial, except for a positive total effect on partner's RS ($b = 0.22$, $p = .108$), which warrants replication taking the lower bound of the $95\%-CI$ (0.003)

into account. For katagelasticism, there was an indirect actor-based mediation effect by anxiety on actors' RS ($b = 0.18$, 95%-CI = $[-0.39, -0.08]$, $p = .011$) but total effects of katagelasticism on RS were not substantial.

7 Discussion

Study 2 shows that the *fear* of being laughed at was positively related to high expressions of attachment anxiety and -avoidance, and the *joy* in being laughed at did go along with low expressions of avoidance. In contrast to Study 1, the joy in laughing at others was positively associated with attachment anxiety. For a better understanding of the associations, we conducted a mini-meta-analysis (Goh, Hall, & Rosenthal, 2016) across data from both studies and found a mean correlation of $r = .14$ (95%-CI = $[.06, .22]$, $z_{\text{combined}} = 3.00$, $p = .003$ [two-tailed]; $N = 555$) between katagelasticism and anxious attachment. This points toward a small positive association, as found in children and adolescents (e.g., Wu et al., 2015, in press). The partner effects indicate that the dispositions are widely independent from their partners' attachment styles. An exception was a small effect regarding gelotophobes' partners being anxiously attached, which warrants replication in future studies.

Further, we tested the mediating effects of attachment on the association between the dispositions and an indicator of global RS. As reported previously (e.g., Butzer & Campbell, 2008), high anxiety and avoidance predicted RS negatively in both actors and partners. The analysis of mediational effects showed indirect effects of anxiety and avoidance toward RS on the actor level, which *enhanced* the negative association between gelotophobia and RS. Avoidance contributed negatively to gelotophobes' *partners'* RS. Gelotophiles' inclinations to low avoidance had positive indirect effects on actors' and partners' RS; thus, one might argue that gelotophiles' openness to approach close relationships contributes towards their own and partner's satisfaction. In line with Study 1, gelotophilia was unrelated to anxiety and did not demonstrate a mediating effect on RS. Finally, katagelasticism was unrelated to RS, but katagelasticists' inclinations to anxious attachment contributed negatively to RS in actors.

Taken together, the consideration of romantic attachment styles contributes to our understanding of how dispositions to deal with laughter affect romantic life and RS.

Limitations. To our knowledge, to date, no sample size recommendations for APIMeMs exist. Hence, our findings are of an initial character and replication in a sample of larger size is needed to identify potential effects of smaller size. Our mediation analysis was conducted with a global indicator of RS that does not cover narrow facets of RS (e.g., sexuality, mistrust, or future orientations). While the assessment of RS through a single-item has been shown to validly assess global RS and is frequently used (e.g., Dyrenforth et al., 2010), there is evidence that the dispositions are differentially related to facets of RS (Brauer & Proyer, 2018). While this goes beyond the scope of the present study, future research might further examine the mediating effects of attachment on the dispositions-RS associations on the facet-level of RS.

8 General Discussion

We narrow a gap in the literature on how dealing with ridicule and being laughed at is associated with romantic attachment styles, relationship status, and -satisfaction. Overall, our expectations were widely met. Gelotophobes' insecure attachment is aligned with them being single (Study 1). Nevertheless, Study 2 showed that they do enter relationships eventually, but higher expressions in anxiety and avoidance in their attachment seems to contribute to their and their partners' low RS. Longitudinal data are needed to further clarify the causality of these associations. Although there is evidence that romantic attachment differs from parental attachment (e.g., Klohnen et al., 2005), it can be expected that early experiences in childhood and adolescence contribute to a better understanding of the findings. For example, gelotophobia relates to lower remembered social support by family, peers, and teachers (Weibel & Proyer, 2012) and intense experiences of having been ridiculed may be an important antecedent for developing gelotophobia (Ruch et al., 2010, 2014). Studies on the impact of parenting styles showing that gelotophobia in adulthood relates to low parental

attachment (Proyer et al., 2012; Wu et al., 2015, in press) provide further support for this notion. Hence, parental behavior characterized by low warmth, punishment, and high control may not only facilitate the development of gelotophobia, but also have an impact on later romantic life.

Gelotophilia is characterized by low avoidance, which fits well to findings on greater remembered experiences of social support (Weibel & Proyer, 2012). Low avoidance may also be associated with behaviors that potentially facilitate RS (e.g., Butzer & Campbell, 2008; Neumann et al., 2007; Shaver & Brennan, 1992). Finally, avoidance is a characteristic of the katagelasticists' attachment. Again, longitudinal studies or behavior observations will be needed for a better understanding of the underlying mechanisms. Katagelasticism exists widely unrelated from remembered social support (Weibel & Proyer, 2012) and romantic relationships may be an ambiguous endeavor for katagelasticists. Difficulties in close relationships can be foreseen if humor and laughter are used to put others down for their own enjoyment, but this might be a case in which the similarity of partners comes into play (Brauer & Proyer, 2018). The similarity in how people deal with laughter might help those prone to katagelasticism bond, despite inclinations to an avoidant attachment style.

Limitations and outlook. Firstly, the data in our studies are of cross-sectional nature, and comments on causality can only be made from a theoretical perspective. While Study 1 also incorporated the retrospective relationship status (i.e., having never been in a relationship), “true” longitudinal data are needed to further validate the findings and clarify the pathways concerning the direction of the (co-)development of attachment styles and the dispositions from childhood/adolescence to adulthood, within relationships, and concerning the tested outcomes. For example, observational studies with follow-ups would inform about the antecedents (e.g., frequency of initiated laughter, reactions towards laughter) to entering a relationship and potential changes in the dispositions, attachment styles, and RS. Secondly, both studies rely only on self-reports; thus, common method bias and perceptual biases

might confound the findings. Thirdly, this study is of an initial nature and focused exclusively on direct associations between the laughter-related dispositions and attachment styles. It is desirable that future research examines the role of gelotophobia in predicting attachment styles amongst other traits, such as the big five and its narrow facets using comprehensive measures (e.g., the 240-item NEO-PI-R). This would allow to examine the incremental contribution of gelotophobia in predicting attachment styles. Fourthly, we studied adults' romantic attachment only, thus, the findings cannot be generalized towards all types of close others (i.e., family members or friends; e.g., Klohnen et al., 2005). Finally, the generalizability of the findings is limited as only German-speaking participants were tested.

Overall, our findings contribute to understanding how individual differences in dealing with laughter and ridicule are related to adults' romantic attachment and how they affect romantic life. An examination on the micro-level (e.g., personal interactions during courtship) is desirable. For example, there is evidence that laughter indicates romantic attraction in "speed-dating" situations (Grammer, 1990) and it would be interesting to analyze the role of the laughter-related dispositions and attachment in predicting romantic interest and responsiveness during courtship, as smiling and laughter are basic means of non-verbal communication. We hope that our findings provide a fruitful contribution for future studies on the role of humor and laughter in relationship research.

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Table 1

Descriptive Statistics and Correlations of the PhoPhiKat-45 and the Experiences in Close Relationships

	Descriptive Statistics			Inter-Correlations								
	<i>M</i>	<i>SD</i>	α	Age	Sex ^a	Pho	Phi	Kat	Anx	Avoid	Exp	Status
<i>PhoPhiKat-45</i>												
Gelotophobia	1.98	0.54	.87	-.09	.07	—	-.25***	.11	.43***	.24***	-.06	-.09
Gelotophilia	2.35	0.53	.87	-.17**	-.14*	-.24***	—	.33***	-.02	-.17**	.05	.12
Katagelasticism	1.95	0.50	.86	-.16*	-.23***	.11	.37***	—	.06	.09	-.01	.12
<i>ECR</i>												
Anxiety	3.76	1.04	.88	-.04	.13*	.44***	-.03	.03	—	.00	-.10	-.18**
Avoidance	2.81	1.05	.92	.09	-.01	.23***	-.18**	.09	.00	—	-.29***	-.42***
<i>Relationship</i>												
Experience	—	—	—	.15*	-.06	-.08	.03	-.02	-.11	-.27***	—	.42***
Status	—	—	—	.17**	.00	-.10	.08	.08	-.18**	-.39***	.44***	—

Note. $N = 247$ participants. Diagonal in the correlation matrix displays internal consistencies. Above/below diagonal zero-/second-order correlations controlled for age and sex. Pho = Gelotophobia, Phi = Gelotophilia, Kat = Katagelasticism, Anx = Anxiety, Avoid = Avoidance, Exp = Relationship experience.

^a1 = male, 2 = female.

* $p < .05$. ** $p < .01$. *** $p < .001$. Two-tailed.

Table 2

Stepwise Regression Models Predicting Attachment Styles by Age, Sex, and Three Dispositions Towards Ridicule and Being Laughed at

	Anxiety					Avoidance				
	<i>b</i>	SE(<i>b</i>)	β	<i>p</i>	R^2	<i>b</i>	SE(<i>b</i>)	β	<i>p</i>	R^2
<i>Step 1</i>					.02					.01
Intercept	3.34	0.30		<.001		2.63	0.31		<.001	
Age	0.00	0.01	-.03	.693		0.01	0.01	-.01	.184	
Gender	0.28	0.14	.13	.046		-0.02	0.14	.09	.910	
<i>Step 2</i>					.20					.06
Intercept	1.73	0.35		<.001		1.71	0.38		<.001	
Age	0.00	0.13	.01	.878		0.01	0.01	.10	.097	
Gender	0.22	0.01	.10	.082		-0.05	0.14	-.02	.723	
Gelotophobia	0.83	0.11	.43	<.001		0.47	0.12	.24	<.001	
<i>Step 3</i>					.21					.08
Intercept	1.16	0.55		.037		2.12	0.60		<.001	
Age	0.00	0.01	.03	.662		0.01	0.01	.10	.137	
Gender	0.24	0.13	.11	.069		-0.02	0.14	-.01	.891	
Gelotophobia	0.88	0.12	.46	<.001		0.35	0.13	.18	.007	
Gelotophilia	0.21	0.13	.11	.107		-0.35	0.14	-.18	.012	
Katagelasticism	-0.05	0.14	-.03	.699		0.32	0.15	.15	.030	

Note. $N = 247$. All Variance Inflation Factors ≤ 1.31 .

Table 3

Parallel Mediation Analyses of Predicting Relationship Status and Relationship Experience (Y) by Gelotophobia (X) Mediated by Attachment Styles Anxiety (M1) and Avoidance (M2)

		Relationship Experience					Relationship Status				
	Direction of Effect	<i>b</i>	OR	SE	<i>d</i>	<i>p</i>	<i>b</i>	OR	SE	<i>d</i>	<i>p</i>
<i>Baseline Model</i>											
c	Pho→Y	-0.44	0.64	0.23	-0.24	.006	-0.39	0.68	0.17	-0.21	<.001
<i>Mediation Model</i>											
Direct Effects											
a1	Pho→Anxiety	0.84	—	—	—	<.001	0.84	—	—	—	<.001
a2	Pho→Avoidance	0.45	—	—	—	<.001	0.45	—	—	—	<.001
b1	Anxiety→Y	-0.51	0.60	0.14	-0.28	<.001	-0.59	0.56	0.09	-0.32	<.001
b2	Avoidance→Y	-0.88	0.42	0.09	-0.48	<.001	-0.98	0.38	0.06	-0.53	<.001
c'	Pho→Y	0.33	1.40	0.60	0.19	.019	0.48	1.61	0.52	0.26	.002
Indirect Effects											
a1b1	Pho→Anxiety→ Y	-0.43	0.65	0.20	-0.24	<.001	-0.49	0.61	0.10	-0.28	<.001
a2b2	Pho→ Avoidance → Y	-0.39	0.68	0.15	-0.21	<.001	-0.44	0.65	0.09	-0.24	<.001
Indirect Total		-0.82	0.44	0.27	-0.45	<.001	-0.93	0.40	0.09	-0.50	<.001
Total Effect		-0.49	0.62	0.40	-0.26	.013	-0.45	0.64	0.20	-0.24	.001

Note. *N* = 247 participants. Outcomes are coded 0 = not in a relationship (ever/currently), 1 = having been in a relationship before/being in a relationship currently. OR = Odds Ratio. *d* = Standardized effect size of Odds Ratio. Pho = Gelotophobia.

Table 4

Descriptive Statistics, Reliabilities, and Similarity, and Differences Between Partners' Dispositions Towards Ridicule and Being Laughed at and Attachment Styles

	Females			Males		Within-Partner								Between-Partner					
	α	M	SD	M	SD	r	d	1	2	3	4	5	6	1	2	3	4	5	6
<i>PhoPhiKat-45</i>																			
(1) Pho	.87	1.91	0.54	1.84	0.45	.23	0.14	–	-.36	-.01	.48	.25	-.21	–	-.13	-.02	.03	.08	-.21
(2) Phi	.86	2.39	0.53	2.51	0.47	.25	0.24	-.31	–	.33	-.09	-.23	.21	-.03	–	.22	.10	-.08	.03
(3) Kat	.84	1.97	0.45	2.18	0.43	.19	0.49	.20	.29	–	.14	.04	-.02	.16	.08	–	.33	.13	-.05
<i>ECR</i>																			
(4) Anxiety	.89	3.70	1.02	3.35	0.96	.27	0.03	.34	-.15	.24	–	.09	-.21	.13	-.10	.07	–	.29	-.31
(5) Avoidance	.89	2.39	0.76	2.41	0.83	-.05	0.35	.46	-.18	.02	.15	–	-.55	.15	-.13	.03	.27	–	-.43
(6) <i>Happiness</i>	–	4.05	1.09	4.06	1.13	.61	0.01	-.27	-.02	-.10	-.32	-.57	–	-.14	.11	-.03	-.17	-.33	–

Note. $N = 154$ opposite-sex romantic couples. ECR = Experiences in Close Relationships. Happiness = Relationship satisfaction indicator. r = Partner similarity. d = Cohen's effect size. Correlations $\geq .16/.21/.26$ significant at $p < .05/.01/.001$ (two-tailed).

Table 5

Unstandardized Effects of the Actor-Partner Interdependence Mediation Model Testing the Mediating Effect of Attachment Styles (M) on the Association Between Three Dispositions Towards Ridicule and Being Laughed at (X) and Relationship Satisfaction (Y)

	Gelotophobia			Gelotophilia			Katagelasticism		
	Baseline	Anxiety	Avoidance	Baseline	Anxiety	Avoidance	Baseline	Anxiety	Avoidance
<i>Direct</i>									
<i>X→M</i>									
Actor		0.96***	0.44***		-0.25	-0.30**		0.41**	0.03
Partner		-0.05	0.09		0.05	-0.09		0.08	0.13
<i>M→Y</i>									
Actor		-0.34**	-0.66***		-0.40***	-0.72***		-0.40***	-0.70***
Partner		-0.19	-0.29***		-0.19	-0.29**		-0.21*	-0.28**
<i>X→Y</i>									
Actor	-0.46***	-0.26	-0.18	0.44*/-0.11	-0.18	-0.32	-0.16	-0.01	0.02
Partner	-0.28*	-0.04	-0.02	0.28/0.00	0.18	0.06	-0.06	0.04	-0.16
<i>Indirect</i>									
<i>Actor</i>									
Total		-0.58**	-0.50**		-0.09	-0.08		-0.19	-0.22
Total Indirect		-0.31**	-0.32***		0.09	0.24**		-0.18*	-0.06
Actor-Actor		-0.33**	-0.29***		0.10	0.22**		-0.17*	-0.02
Partner-Partner		0.01	-0.03		-0.01	0.03		-0.02	-0.04
<i>Partner</i>									
Total		-0.20	-0.21		0.21	0.22		-0.08	-0.09
Total Indirect		-0.16	-0.19**		0.03	0.15*		-0.12	-0.10
Actor-Partner		-0.18	-0.13**		0.05	0.09*		-0.09	-0.01
Partner-Actor		0.02	-0.06		-0.02	0.07		-0.03	-0.09

Note. $N = 154$ heterosexual romantic couples. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed). Coefficients in boldface indicate that 95%-CIs (displayed in ESM A) did not contain zero. All effects were independent from gender ($p > .28$) except for the baseline model of gelotophilia ($p = .12$).

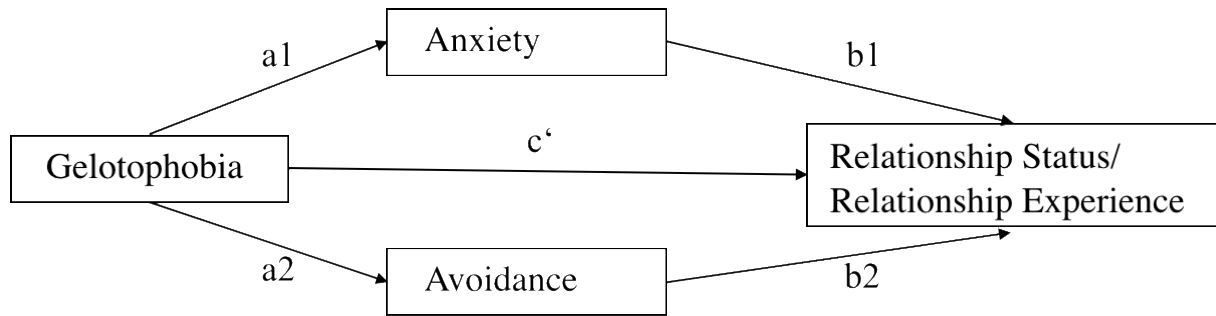
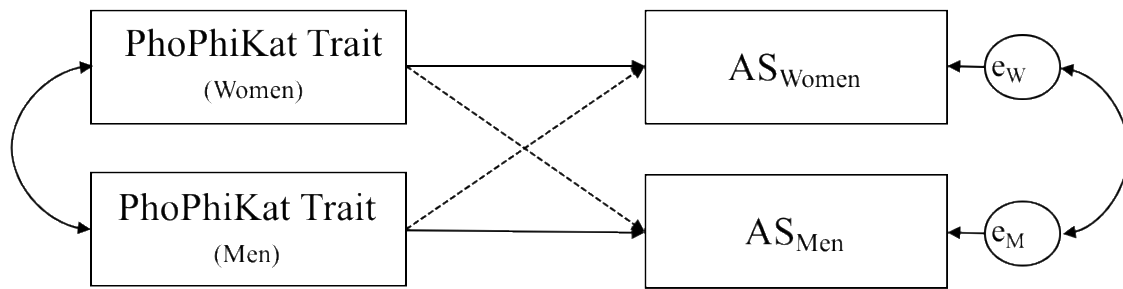
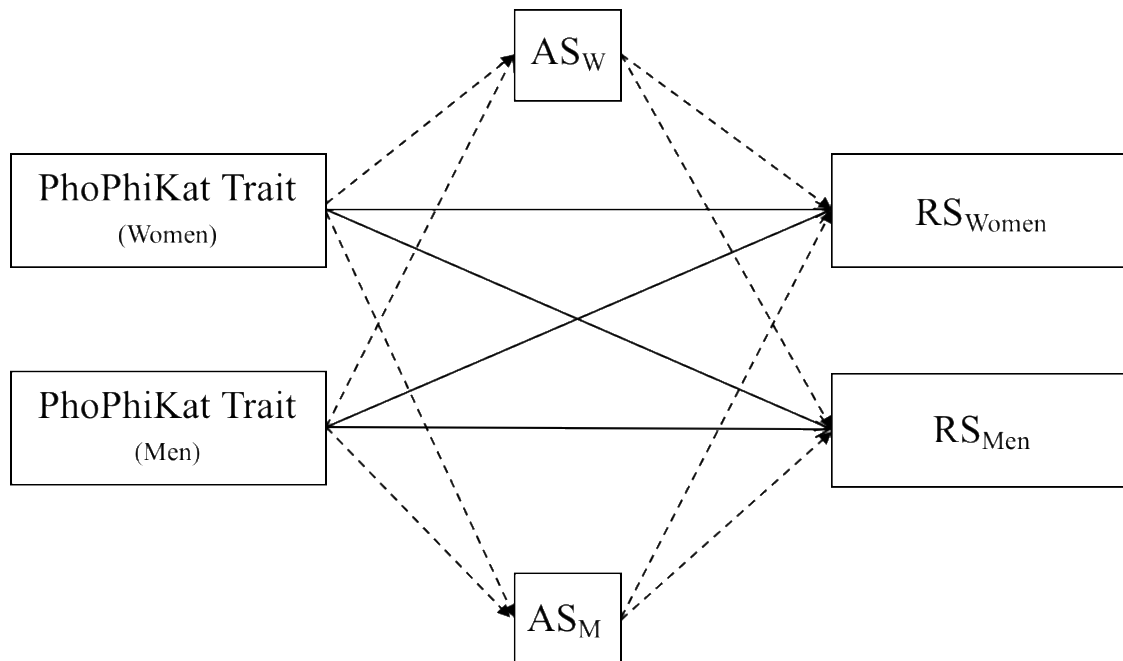


Figure 1. Parallel Mediation Model Predicting Relationship Status and Relationship Experience by Gelotophobia Mediated by Attachment Styles (Anxiety and Avoidance).



a) Actor-Partner Effects Model



b) Actor-Partner Interdependence Mediation Model

Figure 2. Depiction of the Actor-Interdependence Models. For Clarity, the Correlations Between Partners' Predictor-, Mediator, and Outcome Variables Have Been Omitted. In Model (a) the Crossed lines (--) Indicate Partner Effects whereas the Paths depicted by Wide Crossed Lines (- -) Indicate Indirect Effects in Model (b).